

What is claimed is:

1. A method of determining a frequency response of a communication system, comprising:
 - tuning to a selected digital channel frequency;
 - obtaining an absolute signal strength measurement for said selected digital channel frequency;
 - obtaining relative frequency response measurements for said particular selected digital channel; and
 - combining said relative frequency response measurements and said absolute signal strength to obtain an absolute level frequency response for said selected digital channel.
2. The method according to claim 1, wherein said relative frequency response measurements are obtained by:
 - obtaining relative time domain measurement values from the selected digital channel frequency; and
 - performing a fast Fourier transformation of said relative time domain measurement values.
3. The method according to claim 1, further comprising displaying said absolute level frequency response.
4. The method according to claim 1, further comprising storing said absolute level frequency response.

5. The method according to claim 2, further comprising determining whether said selected digital channel is a last channel specified by a channel plan.
6. The method according to claim 1, further comprising:
 - automatically tuning to a frequency of a subsequent digital channel;
 - obtaining a subsequent absolute signal strength measurement for said subsequent digital channel frequency;
 - obtaining subsequent relative frequency response measurements for said subsequent digital channel frequency; and
 - combining said subsequent relative frequency response measurements with said subsequent absolute signal strength measurement to obtain a subsequent absolute level frequency response.
7. The method according to claim 6, wherein a frequency band exists between a maximum frequency of said absolute level frequency response and a minimum frequency of said subsequent absolute level frequency response, further comprising extrapolating between a maximum frequency absolute level response of said absolute level frequency response and a minimum frequency absolute level response of said subsequent absolute level frequency response.
8. The method according to claim 5, wherein said channel plan includes a list of digital channels to be sequentially tuned, and wherein if said particular selected digital channel is said last channel then the method further comprises extrapolating between a maximum value of an absolute level response for one of said listed channels and a minimum value of an absolute level response for a next adjacent channel of said listed channels.

9. The method according to claim 8, further comprising displaying a result of said extrapolation for a combination of absolute level responses of said adjacent channels.

10. The method according to claim 8, further comprising storing a result of said extrapolation for a combination of absolute level responses of said adjacent channels.

11. A method of determining a frequency response of a communication system, comprising:

tuning to a selected digital channel frequency;

obtaining first relative frequency response measurements for said selected digital channel for a first location;

obtaining second relative frequency response measurements for said selected digital channel for a second location;

obtaining an absolute signal strength at said first location and said second location;

combining said first relative frequency response measurements and said first location absolute signal strength to obtain a first absolute level frequency response value;

combining said second relative frequency response measurements and said second location absolute signal strength to obtain a second absolute level frequency response value; and

comparing said first absolute level frequency response value from said second absolute level frequency response value to obtain said frequency response of the communication system.

12. The method according to claim 11, wherein said first relative frequency response measurements are obtained by:

obtaining time domain measurement values from said selected digital channel frequency; and

performing a fast Fourier transformation of said time domain measurement values.

13. The method according to claim 11, further comprising displaying said frequency response of the communication system.

14. The method according to claim 11, further comprising storing said frequency response of the communication system.

15. The method according to claim 11, further comprising determining whether said particular selected digital channel is a last channel specified by a channel plan.

16. The method according to claim 11, further comprising tuning to a subsequent digital channel frequency and obtaining a subsequent frequency response of the communication system.

17. The method according to claim 15, further comprising extrapolating between a maximum frequency absolute level response of the frequency response and a minimum frequency absolute level response of said subsequent frequency response.

18. The method according to claim 16, further comprising displaying a result of said extrapolation for a combination of absolute level responses of said adjacent channels.

19. The method according to claim 16, further comprising storing a result of said extrapolation for a combination of absolute level responses of said adjacent channels.
20. The method according to claim 16, further comprising repeating the method by retuning to said selected channel frequency, wherein said selected channel is a first channel on said list of channels.
21. An apparatus for sweep testing a communication system, comprising:
a tuner;
digital demodulation and decoding circuitry that receives a signal at a selected channel frequency from said tuner and that outputs adaptive equalizer weights; and
a controller having a channel list, said controller operative to select in sequence, via said tuner, every channel listed for a desired frequency band, to measure and record absolute power for each respective selected channel, to acquire lock for a predetermined time on each respective selected channel, to measure and record a relative frequency response of each respective selected channel based on said adaptive equalizer weights during each corresponding channel lock time, and to combine the absolute power measurement with the corresponding relative frequency response measurement for each selected channel to then output a system frequency response based on said combined measurements.
22. The apparatus as claimed in claim 20, wherein said controller performs a fast Fourier transformation on said adaptive equalizer weights in order to determine said relative frequency response of each respective selected channel.
23. The apparatus as claimed in claim 21, further comprising a storage device for storing said absolute and relative measurements.

24. The apparatus as claimed in claim 21, further comprising a display device operative to display at least one of said absolute measurement, said relative measurement, and said system frequency response.

25. The apparatus as claimed in claim 21, wherein said digital demodulation and decoding circuitry includes an adaptive equalizer and an I/Q decoder.

26. An apparatus for determining a frequency response of a communication system, comprising:

a tuner operative to tune to a selected digital channel frequency band; and

a measurement circuit, said measurement circuit operative to:

obtain absolute signal strength measurements for said selected digital channel frequency band;

obtain relative frequency response measurements for said selected digital channel frequency band; and

combine said relative frequency response measurements and said absolute signal strength measurements to obtain an absolute level frequency response for said selected digital channel frequency band.

27. The apparatus as claimed in claim 25, wherein said measurement circuit includes a processor.

28. The apparatus as claimed in claim 26, wherein said measurement circuit further includes a QAM demodulator and an I/Q decoder.

29. The apparatus as claimed in claim 25, further comprising a display for displaying the absolute level frequency response.

30. The system as claimed in claim 25, wherein said tuner is further operative to automatically tune to a subsequent digital channel frequency, and wherein said measurement circuit is further operative to obtain a subsequent level frequency response for said subsequent digital channel frequency.